PROJECT TITLE: Analytical Sensory Correlations

PROJECT LEADER: B. W. Good PERIOD COVERED: November 1985

I. RL vs. RCB SMOKE

The organic gas phase (FID and NPD) and neutral, basic and acidic fractions of the ten RL/RCB samples were analyzed by descriptive analysis (BMDP7D) and factor analysis (BMDP4M). While there was large variability in each sample type, some differentiation was observed. All four production models of RL-like-RCB were analytically similar to each other. RCB and one of the plain RL samples appeared clearly distinguishable from the other 8 samples in one or more of the profiles. The identification of responsible peaks for the observed differentiation is in progress.

II. MENTHOL CIGARETTES

Four menthol brands cigarettes, Kool 85, Salem 85, Newport 85 and B&H 100, were compared analytically. The latter was additionally sampled with its dilution holes taped making a total of five sample types. Smoke data was collected for characterization and comparison by multivariate analysis. TPM components were chromatographically analyzed by steam distillation-fractionation and gas phase components by FID and NPD. Each sample was analyzed three times. The data, which is organized for BMDP analysis, contains intensity measurements of 226 TPM components and 125 gas phase components. The data analysis is in progress.

III. ODOR PROFILING

Two vanilla bean samples, Tahitian and Mexican, were received from the odor profiling panel (M. Jeltema and E. Southwick) for chromatographic comparison and identification. The samples were ground and steam distilled in duplicate. These two beans show significant differences in the contents of octenal, 1-octen-3-ol, hexanoic acid, guaicoal, anisaldehyde, octanoic acid, t-methyl cinnamate, methyl anisate, anisyl acetate, eugenol and anisyl alcohol. Tahitian beans contained about twice the amount of vanillin as the Mexican beans.

IV. LABSAM

A final report was written.

V. REPORTS

"LABSAM: A Standard Customizable Laboratory Management System at Philip Morris", Bennie W. Good, Acc. No. 85-226, November 15, 1985.

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